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# The Transformation of Political Cleavages in Swiss Metropolitan Areas

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## *1. Introduction*[1]

As in most other countries in the world, an increasing proportion of the population in Switzerland lives in urban and metropolitan areas. This evidence notwithstanding, many actors and observers of Swiss politics, but also political scientists in this country continue to emphasise multiple effects supposedly resulting from a cleavage between rural and urban areas of the country. True, this traditional cleavage has played a strong role in the constitutional history of the country (e.g. in the design of the federalist institutions), as well as in the structuring of the national party system, but also with respect to political behaviour during much of the 19th century and long into the 20th. With only 26.7% of the population living in rural areas in 2000 – with a tendency to further decrease – the rural-urban cleavage is, however, bound to become less and less significant to understand politics in Switzerland. Against the background of increasing urbanisation and metropolitanization, the interesting question is to what extent cleavages *within* the urban area can be discerned and to what extent these cleavages structure political behaviour and governance in this country.

The aim of this paper, then, is to explore the existence and the relevance of cleavages within Swiss metropolitan areas. We do this on the basis of the analyses of structural and political change suggested in the IMO research programme for the Stuttgart meeting. The paper starts with a first theoretical section that presents the conceptual framework of the analysis, as well as results of recent research showing that a profound transformation of the cleavage structure has taken place from the early 1990s onwards. The second part of the paper then presents the results of the analyses of structural, as well as electoral data at the communal level in the seven Swiss metropolitan areas under scrutiny. These include the IMO-typology of communes for all seven metropolitan areas, as well as bi-variate and multi-level regression analyses of electoral turnout and voter cleavage scores on four major political cleavages.

## *2. The cleavage concept and its relevance for studying metropolitan politics*

### 2.1 Conceptual clarification

Our analysis of political change in the metropolitan areas in Switzerland will be revolving around the concept of *political cleavages*. Going back to the seminal work of Lipset and

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Rokkan (1967) on the evolution of party systems in Europe, the concept of cleavage is based on the idea that societies are characterised by relatively stable lines of conflict that structure political behaviour therein. Lipset and Rokkan have argued that cleavages are a result of societal conflicts that have occurred during the modernisation process. Deeply entrenched within in the societal structure, they orient systems of interests and values over a long period. As such, cleavages are therefore able to explain many aspects regarding the nature of politics found in a given society – such as the formation and the continued existence of certain types of political parties.

Hence, the concept of cleavage has often been used to explain the structure of party systems as well as electoral and political behaviour more generally. However, Bartolini and Mair (1990. 212 ff) have shown that, more often than not, the concept of cleavage has remained vague and ambiguous, due to a variety of uses oscillating "between the two main approaches of political sociology: that of social stratification and its impact on institutions and political behaviour, on the one hand, and that of political institutions and their impact on social structure and change, on the other" (Bartolini and Mair 1990: 215). They hence suggest to clarify the notion of cleavage by establishing a theoretically autonomous definition of cleavage "as a concept which links social structure and political order" (Bartolini and Mair 1990: 215), by incorporating three levels:

- An *empirical* element that allows to 'objectively' identify the socio-structural basis of separating groups with respect to various characteristics such as religion, ethnicity, economic position etc. This is the structural ground for individual and organisational value systems.
- A *normative* element, i.e. a set of shared values and beliefs providing a sense of collective identity and roles of social groups within their position in the social structure. Any political cleavage involves a range of policy-related conflicts in which social groups will defend characteristic ideological positions.
- An *organisational/behavioural* element, i.e. a set of "individual interactions, institutions and organisations, such as political parties" (Bartolini and Mair 1990: 215), which develop as part of the cleavage. Cleavages, to exist, must be mobilised by political organisations or institutions that make them appear.

In other words, Bartolini and Mair's definition emphasises that a cleavage does not simply equal socio-structural divisions within society: class is different from the class-based cleavage; the ethnic mosaic is distinct from the ethno-linguistic cleavage. For a cleavage to exist, it takes structure, values and organisation simultaneously (Ladner 2004: 315).

### 2.2 The emergence of new cleavages

In their work on European party systems, Lipset and Rokkan (1967) have not only identified four major cleavages that have structured the political space throughout Europe – the centre/periphery, religious/secular, rural/urban and owner/worker cleavages. They also argued that these four classic cleavages continue to be the major structuring element of European politics, as is indicated by the relative stability of the party systems in most European countries until the late 1960s ('frozen party system'-hypothesis). Whereas the former contention is widely accepted, the latter has been subject to heavy debate. Two arguments are important in this debate.

On the one hand, it has been argued that the structuring capacity of the four classic cleavages has been reduced since World War II, due to societal change such as "secularisation, value change, rising levels of education, improved standards of living and sectoral change (teritiarization)" (Kriesi et al. 2006: 923). Some have argued that this resulted in the emergence of new cleavages, such as the "new value" cleavage diagnosed by Inglehart (1990). Others have, instead, argued that these developments have transformed the classic cleavages rather than making them disappear. An influential contribution in this respect was Kitschelt's (1994) study showing that the class cleavage has been transformed by the emergence of a conflict between libertarian and authoritarian values since the late 1960s, thereby adding a new 'cultural' dimension to the traditional left-right opposition mainly concerned with 'socio-economic' issues. Similarly, current work by Kriesi et al. (2006) suggests that the 1990s have seen the emergence of a new conflict between losers and winners of globalisation processes, thereby leading to a further differentiation of the cultural and socio-economic dimensions of the political spaces, inasmuch as the attitudes towards globalisation encompass both socio-economic aspects (e.g. fear of losing one's job due to delocalisation) and cultural ones (e.g. fear of losing one's identity due to increased immigration).

On the other hand, it has been argued that party voting and party system characteristics are bad indicators for the evolution of cleavage structures. Indeed, it can be argued that the emergence of new cleavages also leads to an adaptation of existing mainstream parties who "take up the new preferences, identities, values and interests, and interpret and articulate them in their own specific ways" (Kriesi et al. 2006: 925). Hence, evolving party programmes with traditional parties (e.g. the trend towards "new labour" in European social democracy) can be at least as indicative for changing cleavage structures – if not more – than the foundation of new parties at the margins of the party system (e.g. the Greens in the 1970s). But if parties have changed as a consequence of the transformation of cleavage structures, it must also be assumed that changes in the meaning of party voting have occurred in parallel:

voting for a Social Democratic Party or for a Nationalistic party could mean something totally different in the beginning of the 1980s than it does at the end of the 1990s – depending on the ways in which these parties have adapted to the transformed cleavages.

### 2.3 Political cleavages in Switzerland and their transformation in the 1990s

The four classic cleavages identified by Lipset and Rokkan have generally been considered relevant for understanding the political space in Switzerland as well. As far as the party system is concerned, Linder (2005: 86 ff.) argues that the lines of division between the four major parties in Switzerland can be adequately explained by situating them in the Lipset and Rokkan cleavage typology (**Table** 1). Two additional observations need to be emphasised in this respect. On the one hand, political parties in Switzerland have always tended to build on the mobilising potential resulting from several cleavages (e.g. the FDP tends to mobilise the urban secular right). On the other hand, although Switzerland is composed of three different linguistic communities (German, French and Italian speaking), who show significantly different value orientations and attitudes on various policy issues (Kriesi 1996), this line of division is not organised by the party system. All major parties exist in all three linguistic regions; there are no linguistic or ethnic parties such as they can be found in Belgium or Canada, for example. In Bartolini and Mair's terms, we cannot therefore speak of a linguistic cleavage in Switzerland.

**Table 1: The four major Swiss parties in the Lipset/Rokkan cleavage typology**

| | Secularist | | Religious | |
|---|---|---|---|---|
| | Urban | Rural | Centre | Periphery |
| Left | **SP** | | | |
| Right | **FDP** | **SVP** | | **CVP** |

Legend: CVP: *Christlichdemokratische Volkspartei* (Christian Democratic Party)
FDP: *Freisinnigdemokratische Partei* (Radical Democratic Party)
SP: *Sozialdemokratische Partei* (Social Democratic Party)
SVP: *Schweizerische Volkspartei* (Swiss People's Party)

Scholars of Swiss political parties (see Ladner 2004; Ladner 2006) consider that the stability of the Swiss party system until the late 1960s can be considered as a result of the stability of these cleavages – thereby confirming the 'frozen party systems'-hypothesis. However, the emergence of new parties such as the Greens in the 1980s, but also the changing electoral basis of the traditional parties has made clear that these four classic cleavages have lost its structuring effect in the political space. Similarly to developments in other European countries, value change has stimulated the emergence of new lines of political conflict (see

Hug and Sciarini 2002), leading to a profound transformation of the political cleavage structure in Switzerland.

According to Kriesi (2005: 3), this transformation starts in the 1970s with waves of opposition against the four major established parties. In the process, these lose votes massively to newly founded challenger parties mobilising a wide range of positions on the political spectrum – including new parties on the far right, but also new Middle-class parties, the Greens and new parties on the far left. This anti-establishment opposition reaches its height in the national elections of 1991, resulting in a massive success of outsider parties over the four major traditional ones. However, Kriesi (2005: 3) argues that this was merely the prelude to the major transformation of the party system that took place during the 1990s as a consequence of the massive mobilisation by the Swiss Peoples' Party (SVP). By the turn of the millennium, the SVP became the strongest party and managed to more than double its share of votes between the elections of 1991 (roughly 11%) and 2003 (26.7%).

The rise of the Swiss Peoples Party during the 1990s has been considered the single most important question for contemporary electoral studies in Switzerland (Lutz and Selb 2006: 446). The political position advocated by the SVP was mainly a clear opposition to Switzerland's integration into the EU, as well as a strong emphasis on traditional values and national identity, including resistance against immigration. Kriesi et al. (2005) have shown that the key success factor of the SVP was its ability to monopolise this position of opposing the opening of Switzerland towards the outside world in general, and the EU in particular. In the process, the other parties have been compelled to situate themselves with respect to the SVP. This indicates the existence of a cleavage between integration and demarcation ("Öffnung und Abgrenzung") that is increasingly organised in the party system. The result is that the party system in Switzerland today is divided according to two dimensions. To the classical socio-economic division between the left and the right, a new cultural division was added between those who are in favour of Switzerland as an internationally open and culturally liberal country and those who are in favour of traditions and national identity (Kriesi et al. 2005: 5).

As far as the socio-structural basis of this new cleavage is concerned, Kriesi et al. (2006) argue that it relies on a differentiation in terms of winners and losers of globalisation: "The likely winners include entrepreneurs and qualified employees in sectors open to international competition as well as all kinds of cosmopolitan citizens. The expected losers, by contrast, include entrepreneurs and qualified employees in traditionally protected sectors, all unqualified employees and citizens who strongly identify themselves with their national community" (Kriesi et al. 2006: 922).

### 2.4 The relevance of urban areas

Much has been written about the ways in which social change, as well as the emergence of this new cleavage between globalisation losers and globalisation winners transforms the existing cleavages in the Swiss political space (Ladner 2004; Kriesi et al. 2005; Kriesi et al. 2006). However, in terms of the fourfold Lipset and Rokkan typology of cleavages, this work has primarily resulted in affirming the strength of the traditional left-right cleavage (to whose socio-economic dimension, a new cultural dimension has been added), all the while observing the withering away of the religious cleavage or the centre-periphery cleavage in terms of their significance for explaining the structuring of the Swiss political space.

Interestingly however, little is generally said regarding the rural-urban cleavage. This is all the more astonishing, as the SVP – the object of primary scientific interest for Swiss electoral researchers as we have seen above – originally formed in the rural parts of the country, representing the interests of farmers and small rural businesses against those of the city-based radical liberals. How can the rise of the SVP during the 1990s be explained against this background? Ladner contents himself to the observation that the intensity of the rural-urban cleavage is on the decrease, and that the rise of the SVP in recent years has nothing to do with the traditional rural-urban cleavage in terms of an agrarian socio-structural basis (Ladner 2004: 384). In contrast to Ladner, Kriesi et al. (2005: 52) show that the distinction between rural or urban electorate is a significant predictor for the SVP electoral probability at the national level – the rural electorate tends to vote more in favour of the SVP than the urban one. However, this result goes largely uncommented, as the authors then go on to state that the rise of the SVP at the national level has also taken place in urban regions (Kriesi et al. 2005: 54).

It therefore seems that most recent analysis of the transformation of the political space in Switzerland is not really at ease with the question of urban-rural divide. We would argue that even if the rural-urban divide empirically comes up as having some significant explanatory power in the analysis of political and electoral behaviour, it is much too crude a measure to allow significant explanations about the link between territorial development and political structures in this country. Indeed, urbanisation is progressing (73.3% of the population lived in urban areas in the year 2000 (Kübler and Scheuss 2005)), which raises the question of the relevance of the rural-urban divide in general. If the urban area comprises nearly three quarters of the population, it might be more urgent seeking to uncover significant divides *within* the urban areas and to understand their link with political cleavages, thereby possibly

combining an impact on political behaviour that, in turn, contributes to structuring the space of politics in this country.[2]

The aim of this paper is precisely to do that. Based on the threefold definition of cleavage suggested by Bartolini and Mair (1990), we intend to explore the existence and the nature of a link between socio-structural divisions within urban areas, the territorial differentiation of value systems, as well as their political organisation by parties. The focus of the analysis thereby lies on examining the nature of the cleavages identified as the most relevant for Swiss politics with respect to a territorially differentiated socio-structural base. More precisely, we hypothesise that lines of division within the urban space will increasingly have a structuring effect on the nature and the structure of cleavages in Swiss politics. This overall perspective points to three clear questions that we need to answer in this paper, namely

1) What are the socio-structural divisions unfolding in Swiss metropolitan areas? And how do they develop over time?

2) Are there aspects of shared values and/or collective identity unfolding in parallel? And how do these develop over time?

3) Are these socio-structural divisions and shared values/collective identity used by political organisations to mobilise? And how does this develop over time?

In the following, these questions will be investigated based on an analysis of communal level data in the seven IMO metropolitan areas under scrutiny in Switzerland.

## *3. The evolving socio-structural division of metropolitan areas*

Based on the procedure suggested by Jefferey and Vincent in their October 2006 Memo, we specified five types of communes in each of the seven metropolitan areas under scrutiny (Table 2).[3]

The major socio-structural divisions within Swiss metropolitan areas can be shown by the analysis of an index of socio-economic hardship across the five types of communes. The general pattern can be described as follows: urban concentrations (equal to core cities in the cases under scrutiny here) generally show the highest values of the socio-economic hardship index (see also Kübler and Scheuss 2005: 220). They are even more distressed than the

[2] The current campaign for the national elections in 2007 suggests that parties intentionally seek to appeal more to “urban voters”- but it is as yet unclear what they mean by this. The SP clearly has the core cities in mind, whereas the SVP seeks to appeal mainly to the conservative suburban areas.

[3] See the methodological appendix for a description of and procedures adopted and data used in the analysis.

poor suburbs which come second. No clear distinction can be made between middle class suburbs and low density suburbs. Finally, the lowest levels of socio-economic hardship are found in affluent communes, as expected.

**Table 2 : IMO-typology of communes in the Swiss metropolitan areas**

| MA | 1980 | | | 1990 | | | 2000 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Communes | Population | SES index | Communes | Population | SES index | Communes | Population | SES index |
| **Zurich** | **132** | **970,073** | **27.0** | **132** | **1,021,859** | **31.2** | **132** | **1,080,728** | **30.8** |
| Urban concentration | 1 | 369,522 | 43.1 | 1 | 365,043 | 51.8 | 1 | 363,273 | 54.4 |
| Poor suburbs | 40 | 282,803 | 32.0 | 31 | 313,196 | 41.0 | 33 | 345,067 | 44.8 |
| Middle class suburbs | 33 | 141,440 | 24.1 | 28 | 137,623 | 31.6 | 28 | 155,793 | 30.6 |
| Affluent suburbs | 26 | 105,173 | 18.0 | 23 | 83,605 | 23.9 | 23 | 89,838 | 21.2 |
| Low density suburbs | 32 | 71,135 | 30.7 | 49 | 122,392 | 27.9 | 47 | 126,757 | 25.4 |
| **Basle** | **74** | **461,092** | **31.7** | **74** | **475,408** | **37.0** | **74** | **479,308** | **34.5** |
| Urban concentration | 1 | 182,143 | 47.9 | 1 | 178,428 | 58.5 | 1 | 166,558 | 59.4 |
| Poor suburbs | 18 | 102,489 | 35.9 | 18 | 123,101 | 46.7 | 19 | 137,600 | 46.8 |
| Middle class suburbs | 12 | 68,431 | 25.2 | 13 | 108,487 | 37.9 | 12 | 96,764 | 33.3 |
| Affluent suburbs | 13 | 60,492 | 20.4 | 18 | 27,549 | 28.0 | 15 | 31,438 | 21.2 |
| Low density suburbs | 30 | 47,537 | 36.3 | 24 | 37,843 | 35.2 | 27 | 46,948 | 33.0 |
| **Geneva** | **74** | **383,413** | **25.5** | **74** | **425,849** | **36.4** | **74** | **471,314** | **32.4** |
| Urban concentration | 1 | 156,505 | 50.9 | 1 | 171,042 | 67.4 | 1 | 177,964 | 61.4 |
| Poor suburbs | 4 | 59,209 | 45.0 | 16 | 157,250 | 52.1 | 12 | 167,647 | 54.9 |
| Middle class suburbs | 6 | 71,793 | 37.1 | 8 | 30,905 | 37.3 | 12 | 43,220 | 33.7 |
| Affluent suburbs | 36 | 77,340 | 22.4 | 23 | 37,603 | 31.2 | 23 | 48,735 | 26.2 |
| Low density suburbs | 27 | 18,566 | 23.2 | 26 | 29,049 | 29.8 | 26 | 33,748 | 25.6 |
| **Berne** | **41** | **338,817** | **27.7** | **41** | **351,084** | **32.5** | **43** | **349,096** | **31.6** |
| Urban concentration | 1 | 145,254 | 40.4 | 1 | 136,338 | 49.5 | 1 | 128,634 | 46.0 |
| Poor suburbs | 10 | 45,911 | 32.1 | 3 | 23,734 | 46.3 | 6 | 49,675 | 43.0 |
| Middle class suburbs | 14 | 97,610 | 27.0 | 19 | 132,615 | 34.3 | 12 | 103,918 | 35.6 |
| Affluent suburbs | 8 | 38,232 | 19.3 | 13 | 50,664 | 26.4 | 18 | 54,816 | 24.1 |
| Low density suburbs | 8 | 11,810 | 30.2 | 5 | 7,733 | 30.1 | 6 | 12,053 | 32.0 |
| **Lausanne** | **70** | **272,053** | **32.0** | **70** | **300,280** | **39.1** | **70** | **311,441** | **35.8** |
| Urban concentration | 1 | 127,349 | 46.9 | 1 | 128,112 | 61.0 | 1 | 124,914 | 63.8 |
| Poor suburbs | 21 | 74,355 | 37.6 | 18 | 90,986 | 51.1 | 15 | 92,545 | 54.3 |
| Middle class suburbs | 16 | 19,101 | 29.2 | 18 | 39,133 | 38.0 | 19 | 53,858 | 36.3 |
| Affluent suburbs | 13 | 39,050 | 23.9 | 22 | 29,264 | 30.0 | 25 | 27,893 | 24.5 |
| Low density suburbs | 19 | 12,198 | 32.9 | 11 | 12,785 | 37.4 | 10 | 12,231 | 32.7 |
| **Lucerne** | **17** | **173,518** | **32.0** | **17** | **187,195** | **35.9** | **17** | **196,550** | **38.0** |
| Urban concentration | 1 | 63,278 | 39.5 | 1 | 61,034 | 46.9 | 1 | 59,496 | 47.5 |
| Poor suburbs | 10 | 97,301 | 34.7 | 7 | 92,146 | 43.1 | 7 | 100,127 | 48.2 |
| Middle class suburbs | 2 | 4,624 | 25.6 | 5 | 22,050 | 34.2 | 4 | 22,976 | 34.7 |
| Affluent suburbs | 3 | 8,223 | 18.6 | 2 | 9,678 | 24.0 | 3 | 12,784 | 23.0 |
| Low density suburbs | 1 | 92 | 50.9 | 2 | 2,287 | 21.6 | 2 | 1,167 | 26.3 |
| **Lugano** | **72** | **98,395** | **38.7** | **72** | **108,220** | **44.0** | **72** | **120,800** | **46.9** |
| Urban concentration | 1 | 27,815 | 49.9 | 1 | 25,334 | 66.3 | 1 | 26,560 | 68.7 |
| Poor suburbs | 15 | 18,657 | 43.9 | 26 | 50,456 | 53.8 | 27 | 59,501 | 59.1 |
| Middle class suburbs | 36 | 37,525 | 38.8 | 27 | 22,385 | 42.3 | 32 | 26,095 | 41.3 |
| Affluent suburbs | 20 | 14,398 | 33.8 | 17 | 8,871 | 31.3 | 12 | 8,644 | 32.8 |
| Low density suburbs | 0 | 0 | - | 1 | 1,174 | 32.0 | 0 | 0 | - |
| **Overall** | **480** | **2,697,361** | **30.2** | **480** | **2,869,895** | **36.3** | **482** | **3,009,237** | **35.1** |

In addition to these intra-metropolitan differences, there are also differences between the metropolitan areas under scrutiny, though they are not as clear-cut. While the Zurich and the

Berne metropolitan areas are displaying low socio-economic hardship the Lugano area is the most deprived one. All others rank differently during the observed time period.

In terms of temporal development, there has been an increase of socio-economic hardship in all large metropolitan areas between 1980 and 1990. Yet, the socio-economic deterioration was unevenly distributed: some types of communes suffered more worsening than others. Core cities and poor suburbs were particularly concerned by this trend, sometimes middle class suburbs, too, while some low density and affluent ended up in an even more comfortable situation as a decade before. In addition the French and the Italian speaking metropolitan areas were more affected by the expansion of social hardship than the German speaking ones.

During the 1990s urban hardship slightly decreased. Often the alleviation was in favour of middle class, affluent, and low density suburbs. Only the central cities of Geneva and Berne show lower index values in 2000. And save the exception of the Berne metropolitan area poor communes had to face further increase of socio-economic hardship.

In sum the social disparities in the Swiss metropolitan areas deepened from 1980 to 2000. However, this did not lead to the formation of social or ethnic ghettos and there was even a decrease of the hardship disparity between the core cities and their suburbs during the 1990s (Kübler and Scheuss 2005). With respect to the figures above the polarisation is not so much between the core city and its suburbs but between the core city and the poor suburbs on the one hand, and the middle class, affluent, and low density communes on the other, giving rise to a more complex pattern of spatial inequalities.

## *4. The evolving political organisation of cleavages in metropolitan areas*

This section deals with the question of how the socio-structural divisions observed in Swiss metropolitan areas link to the mobilisation of political lines of division as expressed by the party vote at the communal levels. Before turning to this question, however, let us consider whether there is a link between socio-structural divisions and electoral turnout. This analysis is based on communal level turnout in national elections, as data for the local electoral turnout was not available.

### 4.1 National electoral turnout

Beyond the observation that affluent communes are always those with the highest turnout in national elections, there are no consistent patterns in the data detectable (see also **Table** 14 in the appendix, showing significant homogenous subsets within and across metropolitan

areas). Indeed, there are not only large disparities between the different metropolitan areas, but also changing patterns within them, as well as across time.

**Table 3 : Communal level turnout in national elections according to metropolitan areas and types of communes**

| MA | national election turnout (%) | | |
|---|---|---|---|
| | 1979 | 1991 | 1999 |
| **Zurich** | **47.6** | **46.9** | **45.0** |
| Urban concentration | 44.8 | 43.9 | 44.0 |
| Poor suburbs | 41.8 | 41.5 | 40.1 |
| Middle class suburbs | 46.1 | 48.0 | 46.1 |
| Affluent suburbs | 53.0 | 53.9 | 51.2 |
| Low density suburbs | 51.9 | 46.6 | 44.7 |
| **Basle** | **46.6** | **45.9** | **42.5** |
| Urban concentration | 38.5 | 43.4 | 46.4 |
| Poor suburbs | 43.8 | 42.7 | 40.8 |
| Middle class suburbs | 48.2 | 44.4 | 43.8 |
| Affluent suburbs | 46.2 | 52.1 | 47.0 |
| Low density suburbs | 48.1 | 44.4 | 40.6 |
| **Geneva** | **42.9** | **44.1** | **36.4** |
| Urban concentration | 36.2 | 36.9 | 35.2 |
| Poor suburbs | 35.4 | 42.3 | 34.7 |
| Middle class suburbs | 41.2 | 45.9 | 40.6 |
| Affluent suburbs | 45.3 | 52.4 | 41.8 |
| Low density suburbs | 41.3 | 37.6 | 30.6 |
| **Berne** | **52.9** | **50.9** | **45.5** |
| Urban concentration | 46.4 | 45.3 | 43.9 |
| Poor suburbs | 53.9 | 45.7 | 38.5 |
| Middle class suburbs | 50.2 | 48.6 | 45.3 |
| Affluent suburbs | 57.0 | 57.3 | 49.5 |
| Low density suburbs | 52.8 | 47.5 | 40.9 |
| **Lausanne** | **39.0** | **40.3** | **33.4** |
| Urban concentration | 35.4 | 37.6 | 31.5 |
| Poor suburbs | 36.0 | 37.1 | 30.5 |
| Middle class suburbs | 36.3 | 40.9 | 35.2 |
| Affluent suburbs | 39.2 | 40.5 | 33.7 |
| Low density suburbs | 44.8 | 44.0 | 33.5 |
| **Lucerne** | **54.9** | **43.5** | **47.2** |
| Urban concentration | 47.2 | 45.2 | 48.3 |
| Poor suburbs | 42.5 | 42.9 | 45.0 |
| Middle class suburbs | 61.8 | 39.3 | 45.8 |
| Affluent suburbs | 58.6 | 49.6 | 53.3 |
| Low density suburbs | 61.1 | 49.1 | 48.4 |
| **Lugano** | **58.6** | **67.0** | **50.9** |
| Urban concentration | 54.9 | 63.8 | 46.4 |
| Poor suburbs | 59.7 | 67.3 | 49.9 |
| Middle class suburbs | 57.1 | 65.4 | 51.4 |
| Affluent suburbs | 60.4 | 69.1 | 52.0 |
| Low density suburbs | - | 66.9 | - |

Therefore, the multivariate analysis is useful to help understand the determinants of national electoral turnout in the metropolitan areas under scrutiny (**Table** 4). Indeed, the results of this analysis suggest that there is a link between the socio-spatial structure of a metropolitan area and political participation therein. In all three time periods considered, distance to the centre and population size have a negative effect on electoral turnout.

**Table 4 : Determinants of *national election turnout* (multilevel regression model)**

| Parameter | Estimates | | |
|---|---|---|---|
| | **1979** | **1991** | **1999** |
| ***Fixed Effects*** | | | |
| Constant | .018<br>(.064) | -.040<br>(.128) | .009<br>(.061) |
| **Commune-Level Variables** | | | |
| Foreign-born | -.017<br>(.058) | -.201**<br>(.068) | -.188**<br>(.061) |
| SES Hardship | -.121<br>(.070) | .000<br>(.071) | -.045<br>(.094) |
| SES Generally | .316**<br>(.067) | .343*<br>(.067) | .309**<br>(.072) |
| Manufacturing occupation | | -.069<br>(.052) | -.126*<br>(.055) |
| Simpson index of economic diversity | | .089*<br>(.040) | .130**<br>(.037) |
| Residents under 18 years | .362**<br>(.049) | .194**<br>(.044) | .212**<br>(.051) |
| Retirees | .299**<br>(.060) | .006<br>(.056) | .162**<br>(.053) |
| Single-family housing | -.225**<br>(.051) | -.077<br>(.052) | .012<br>(.054) |
| Ln(Density) | .047<br>(.064) | .067<br>(.055) | .035<br>(.056) |
| Out-commuting | | -.109**<br>(.036) | -.053<br>(.038) |
| Distance to the centre | -.190**<br>(.039) | -.143**<br>(.037) | -.166**<br>(.037) |
| New housing | -.280**<br>(.051) | -.087<br>(.045) | -.219**<br>(.043) |
| Stability of residence | .108*<br>(.048) | .077<br>(.044) | .016<br>(.041) |
| Ln(Population) | -.344**<br>(.062) | -.243**<br>(.060) | -.224**<br>(.059) |
| Population growth | | -.134**<br>(.042) | -.079<br>(.041) |
| **Metropolitan Area-Level Variables** | | | |
| Metropolitan population | | | |
| French language region | -.570**<br>(.069) | -* | -.813**<br>(.072) |
| Italian language region | | .708**<br>(.135) | |
| Fragmentation (Zeigler-Brunn) | | +** | |
| Concentration (Herfindahl) | -* | -** | -* |
| Segregation (dissimilarity index) | | +** | |
| Polarisation (Nathan-Adams index) | | | |
| ***Variance Components*** | | | |
| Commune-Level | .431**<br>(.028) | .297**<br>(.019) | .343**<br>(.022) |
| Metropolitan Area-Level | .021<br>(.015) | .108<br>(.061) | .020<br>(.014) |
| -2 Log Likelihood | 961.672 | 796.266 | 848.557 |
| N | 477 | 477 | 474 |

Note: Table entries are standardised maximum likelihood (IGLS) estimates with estimated standard errors in parentheses.
*=p<.05, **=p<.01
As the number of level 2 units is very low (N=7) simultaneous estimation of the effects of metropolitan area-level variables failed. Therefore only models with one variable at the second level had been estimated. For each year the model with the most significant level 2 estimate is reported. Added are the direction and the level of significance of significant estimates from other single level 2 variable models.
Empty cells in upper part of the table indicate missing data whereas in the lower part it stands for non significant effects.

Conversely, high socio-economic status, economic diversity and the proportion of residents under 18 (as a proxy for the presence of families) have a positive effect on turnout. In general, turnout is lower in French speaking metropolitan areas, and higher in the Italian speaking one compared to the metropolitan areas in the other language regions respectively.

Besides these overall observations, it is interesting to note that significant predictors for electoral turnout changed across time. Whereas in the 1979 election, single housing and stability of residence had a negative effect on electoral turnout, this was not the case any more in the 1991 and 1999 elections. However, in the latter, strong negative effects can be noted from the proportion of foreign-born people, as well as from recent population growth, at least in 1991. The proportion of new housing had a negative effect on turnout in 1979 and 1999, too. The institutional structure of a metropolitan area also seems to play a role: during all the time there is a negative effect of concentration. In 1991 there are also positive effects of institutional fragmentation and segregation – contrary to what Oliver (2000) has found.

### 4.2 Cleavage structures

In order to account for the organisational manifestation of political cleavages we computed cleavage scales on the basis of communal median voters[4] for several socio-economic and cultural conflicts. These are, firstly, the classical economic left/right conflict where advocates of free enterprise and limitation of social services oppose those who support regulated capitalism and expansion of social services. Secondly, we use a revised version of the materialistic cleavage whereby we principally confront those who are in favour of protected national economies to those who cheer on open markets. Doing so, we assess the conflict between socio-economic winners and losers of globalisation (Kriesi et al. 2006). Thirdly, median voters for libertarian versus authoritarian values have been determined. Following Flanagan (Inglehart and Flanagan 1987: 1310f.) this cultural conflict encompasses two sets of diverging values regarding a variety of issues such as multiculturalism, freedom and human rights, social order, and traditional morality. For a second cultural conflict scale we have sorted out values that are related to globalisation. Hence, based on Kriesi et al.'s (2006) definition of political programmes regarding cultural globalisation winners and losers, conflicting evaluations of Internationalism, European Community, traditional morality, and multiculturalism have been retained. The results of the analysis are presented in Table **5**.

[4] On the calculation of cleavage scales, as well as the median voter, see the methodological appendix.

**Table 5 : Average communal cleavage scores, based on communal median voters (national elections 1980, 1990 and 2000) according to MAs and types of communes**

| MA | economic left/right (scores) | | | socio-economic globalisation winner/loser (scores) | | | libertarian/ authoritarian (scores) | | | cultural globalisation winner/loser (scores) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **1979** | **1991** | **1999** | **1979** | **1991** | **1999** | **1979** | **1991** | **1999** | **1979** | **1991** | **1999** |
| **Zurich** | **-6.7** | **-10.8** | **2.0** | **4.7** | **5.6** | **0.4** | **-38.1** | **-33.5** | **-10.7** | **0.4** | **-4.9** | **0.4** |
| Urban concentration | -10.2 | -10.3 | -3.4 | 6.7 | 8.5 | 6.6 | -40.6 | -38.2 | -18.9 | -.09 | -6.8 | -5.6 |
| Poor suburbs | -7.6 | -10.8 | 1.8 | 5.3 | 5.9 | 0.9 | -39.8 | -33.7 | -11.9 | 0.2 | -4.8 | 0.4 |
| Middle class suburbs | -7.3 | -10.6 | 2.0 | 5.0 | 5.4 | 0.1 | -37.6 | -34.0 | -10.8 | 0.5 | -5.6 | -2.1 |
| Affluent suburbs | -3.7 | -10.5 | 2.4 | 4.2 | 5.1 | -0.7 | -35.2 | -33.5 | -8.7 | 0.2 | -5.4 | -1.5 |
| Low density suburbs | -7.2 | -11.1 | 2.1 | 4.0 | 5.6 | 0.6 | -39.0 | -32.9 | -10.5 | 0.7 | -4.3 | 3.0 |
| **Basle** | **-8.2** | **-10.9** | **0.0** | **5.7** | **8.7** | **5.2** | **-35.1** | **-38.9** | **-5.5** | **0.2** | **-6.6** | **-3.9** |
| Urban concentration | -15.2 | -9.8 | -7.8 | 8.4 | 9.2 | 6.9 | -40.5 | -40.3 | -17.6 | -1.5 | -7.1 | -5.5 |
| Poor suburbs | -10.0 | -10.9 | -2.6 | 6.3 | 8.9 | 6.3 | -35.0 | -38.8 | -5.4 | 0.3 | -6.6 | -4.3 |
| Middle class suburbs | -9.1 | -11.6 | 0.2 | 5.7 | 10.0 | 6.2 | -34.0 | -42.3 | -6.3 | 0.1 | -6.9 | -4.6 |
| Affluent suburbs | -7.0 | -10.7 | 2.5 | 5.3 | 8.6 | 4.6 | -32.2 | -40.0 | -2.9 | 0.1 | -6.7 | -3.9 |
| Low density suburbs | -7.0 | -10.7 | 0.7 | 5.3 | 7.8 | 4.4 | -36.8 | -36.3 | -6.2 | 0.2 | -6.3 | -3.3 |
| **Geneva** | **-5.7** | **-5.7** | **5.0** | **5.5** | **2.3** | **-0.6** | **-31.9** | **-34.8** | **2.3** | **-0.1** | **-5.4** | **-2.7** |
| Urban concentration | -12.4 | -9.4 | 0.5 | 7.2 | 9.3 | 5.7 | -32.7 | -43.3 | -18.2 | 0.0 | -6.8 | -3.9 |
| Poor suburbs | -12.8 | -8.1 | 1.4 | 7.5 | 6.7 | 5.6 | -35.4 | -40.8 | -9.0 | -1.8 | -6.6 | -3.9 |
| Middle class suburbs | -7.8 | -7.5 | 5.4 | 6.7 | 4.8 | -1.4 | -30.9 | -38.1 | 5.0 | -0.2 | -6.0 | -2.6 |
| Affluent suburbs | -7.9 | -5.0 | 7.0 | 5.9 | 1.9 | -2.5 | -30.1 | -34.6 | 5.4 | 0.1 | -5.0 | -1.7 |
| Low density suburbs | -0.9 | -4.2 | 4.8 | 4.3 | -1.1 | -1.6 | -33.9 | -29.8 | 4.4 | 0.1 | -4.8 | -3.1 |
| **Berne** | **-6.3** | **-11.2** | **0.0** | **1.9** | **6.3** | **2.6** | **-40.4** | **-33.6** | **-13.9** | **0.3** | **-4.6** | **-3.6** |
| Urban concentration | -10.7 | -10.3 | -9.1 | 7.5 | 9.6 | 6.8 | -40.6 | -39.9 | -43.7 | -0.2 | -6.8 | -6.4 |
| Poor suburbs | -7.3 | -11.2 | -0.9 | -1.0 | 10.4 | 4.6 | -39.1 | -42.4 | -11.9 | 0.3 | -6.9 | -4.7 |
| Middle class suburbs | -6.0 | -10.8 | -0.9 | 3.2 | 6.0 | 2.6 | -41.1 | -32.7 | -13.8 | 0.2 | -4.5 | -3.5 |
| Affluent suburbs | -5.1 | -11.3 | 0.9 | 2.8 | 5.1 | 1.2 | -41.0 | -32.1 | -13.7 | 0.3 | -4.2 | -3.0 |
| Low density suburbs | -6.3 | -12.4 | 1.3 | 1.4 | 7.0 | 4.3 | -40.2 | -34.6 | -11.7 | 0.6 | -4.2 | -4.4 |
| **Lausanne** | **-5.3** | **-6.0** | **3.1** | **5.2** | **1.6** | **0.3** | **-35.3** | **-34.3** | **-3.2** | **-0.2** | **-5.9** | **-4.6** |
| Urban concentration | -13.1 | -9.3 | -6.2 | 8.5 | 5.9 | 5.5 | -40.5 | -41.4 | -41.2 | -2.3 | -6.4 | -5.0 |
| Poor suburbs | -8.2 | -7.8 | 1.5 | 6.1 | 4.4 | 2.5 | -36.1 | -36.9 | -9.6 | -0.6 | -6.3 | -4.7 |
| Middle class suburbs | -3.1 | -5.7 | 3.7 | 4.7 | 1.1 | -0.2 | -34.6 | -33.8 | -0.1 | -0.1 | -5.9 | -4.6 |
| Affluent suburbs | -7.4 | -5.2 | 4.5 | 54 | 0.3 | -1.1 | -35.1 | -33.7 | 1.1 | -0.1 | -5.8 | -4.5 |
| Low density suburbs | -2.2 | -4.7 | 1.5 | 4.3 | -0.1 | 0.7 | -34.7 | -31.4 | -6.2 | 0.3 | -5.0 | -4.5 |
| **Lucerne** | **-8.9** | **-15.5** | **3.8** | **6.0** | **11.4** | **3.8** | **-28.4** | **-44.5** | **0.4** | **2.6** | **-7.1** | **-2.5** |
| Urban concentration | -10.5 | -10.6 | 2.7 | 6.2 | 11.2 | 6.3 | -28.7 | -45.0 | -11.7 | 0.2 | -7.1 | -4.9 |
| Poor suburbs | -9.6 | -15.8 | 3.4 | 6.0 | 11.4 | 4.7 | -28.6 | -44.5 | -2.1 | 2.4 | -7.1 | -2.4 |
| Middle class suburbs | -10.5 | -16.2 | 5.7 | 6.1 | 11.5 | 3.6 | -28.6 | -44.4 | -6.9 | 4.3 | -7.1 | -2.3 |
| Affluent suburbs | -4.5 | -13.5 | 3.6 | 5.6 | 11.0 | 3.9 | -27.1 | -44.2 | -0.7 | 2.2 | -7.0 | -3.8 |
| Low density suburbs | -10.5 | -17.4 | 2.0 | 6.2 | 11.6 | -0.3 | -28.8 | -44.4 | -2.4 | 4.4 | -7.1 | -0.1 |
| **Lugano** | **-3.5** | **-10.1** | **3.3** | **5.5** | **7.1** | **5.6** | **-27.1** | **-41.0** | **3.0** | **1.0** | **-6.9** | **-4.4** |
| Urban concentration | 0.9 | -4.7 | 4.7 | 4.5 | 1.6 | 4.9 | -25.5 | -36.2 | 3.6 | 0.3 | -6.7 | -4.7 |
| Poor suburbs | -8.1 | -11.0 | 3.5 | 5.7 | 8.1 | 6.1 | -27.7 | -41.7 | 3.6 | 1.2 | -7.0 | -4.2 |
| Middle class suburbs | -5.0 | -11.1 | 3.1 | 5.6 | 8.0 | 5.9 | -27.6 | -41.6 | 2.2 | 0.9 | -7.0 | -4.6 |
| Affluent suburbs | 2.5 | -8.0 | 3.0 | 5.3 | 5.0 | 3.4 | -25.9 | -39.5 | 3.3 | 1.0 | -6.8 | -4.4 |
| Low density suburbs | - | -4.4 | - | - | 0.0 | - | - | -35.2 | - | - | -6.4 | - |

*a) economic left/right cleavage*

In table 6 spatial disparities of political orientation are represented as significant differences of group means between communal types within metropolitan areas on the one hand and across metropolitan areas on the other. The groups correspond to the so called homogenous groups derived from Scheffe's post hoc test to ANOVA. For purposes of convenience

subsets are visualised with crosses (x) in columns. Communal types of the same homogenous group are gathered by crosses in the same column whereas communal types with different means are separated by crosses in different columns. Though it is possible that the same communal type is part of two or more groups, each group differs from another in at least one type. The same is true for the representation of significant differences between metropolitan areas. Columns with groups of similar communes are ordered according to the cleavage scale from left to right in descending order.

**Table 6 : Homogenous subsets of scores of *economic left/right conflict* 1979-1999 (based on ANOVA)**

| MA | 1979 | | | 1991 | | | 1999 | | |
|---|---|---|---|---|---|---|---|---|---|
| **Zurich** | **X** | **X** | | | **X** | | **X** | **X** | |
| Urban concentration | x | | | x | | | x | | |
| Poor suburbs | | x | | x | | | | x | |
| Middle class suburbs | | x | | x | | | | x | x |
| Affluent suburbs | | | x | x | | | | | x |
| Low density suburbs | | x | | x | | | | x | x |
| **Basle** | **X** | **X** | | | **X** | | **X** | | |
| Urban concentration | x | | | x | | | x | | |
| Poor suburbs | | x | | x | | | | x | |
| Middle class suburbs | | x | | x | | | | x | x |
| Affluent suburbs | | x | | x | | | | | x |
| Low density suburbs | | x | | x | | | | x | x |
| **Geneva** | **X** | **X** | | | **X** | | | | **X** |
| Urban concentration | x | | | x | | | x | | |
| Poor suburbs | x | | | x | | | x | | |
| Middle class suburbs | x | | | x | x | | | x | |
| Affluent suburbs | x | | | x | x | | | x | |
| Low density suburbs | x | | | | x | | x | x | |
| **Berne** | **X** | **X** | | | **X** | | **X** | | |
| Urban concentration | x | | | x | | | x | | |
| Poor suburbs | | x | | x | | | | x | |
| Middle class suburbs | | x | | x | | | | x | |
| Affluent suburbs | | x | | x | | | | x | |
| Low density suburbs | | x | | x | | | | x | |
| **Lausanne** | **X** | **X** | | | | **X** | | **X** | **X** |
| Urban concentration | x | | | x | | | x | | |
| Poor suburbs | | x | | x | | | | x | |
| Middle class suburbs | | x | | x | x | | | x | |
| Affluent suburbs | | x | | x | x | | | x | |
| Low density suburbs | | x | | | x | | | x | |
| **Lucerne** | **X** | | | **X** | | | | **X** | **X** |
| Urban concentration | x | | | x | | | x | | |
| Poor suburbs | x | | | x | | | x | | |
| Middle class suburbs | x | | | x | | | x | | |
| Affluent suburbs | x | | | x | | | x | | |
| Low density suburbs | x | | | x | | | x | | |
| **Lugano** | | **X** | | | **X** | | | **X** | **X** |
| Urban concentration | | x | | x | | | x | | |
| Poor suburbs | x | | | | x | | | x | |
| Middle class suburbs | x | x | | | x | | | x | |
| Affluent suburbs | | x | | | x | | | x | |
| Low density suburbs | | | | x | | | | | |

Homogenous groups according to Scheffe's post hoc test; significance=0.05

With respect to the economic left/right conflict various patterns of intra-metropolitan political differentiation are discernable. To begin with, there are MAs with no significant internal differentiation at all, such as the Lucerne MA. Other metropolitan areas were politically homogenous only for one election of the three election years under scrutiny. These are the Geneva area in 1979 and the Zurich, Basle, and Berne areas in 1991. Second, there are cases that show political polarisation of left central cities versus right wing suburbs such as the metropolitan areas of Lausanne and Berne in 1979 and 1999. There are cases, however, with more complex political disparities between types of urban communes. Such are the metropolitan area of Zurich in 1979 and 1999, the metropolitan area of Basle in 1999, the metropolitan area of Geneva in 1991 and 1999, and the metropolitan area of Lausanne in 1991. In general, these political differences are correlated to socio-economic disparities: distressed central cities and, sometimes, poor suburbs are on the left, affluent suburbs are on the right and middle class and low density suburbs adopt a position between them. Last but not least, the Lugano metropolitan area is a fairly particular case. In 1979 the central city was on the right together with the affluent and middle class suburbs. In 1991 the central city made a shift to the left whereas the poor suburbs joined the middle class and affluent communes on the right. Leaving aside low density suburbs, which is represented by only one commune, these shifts established the central city – suburb polarisation also present in 1999.

From 1979 up to 1999 the number of homogenous groups at the metropolitan area level grew from two to three indicating an increase of political differences between large Swiss metropolitan areas. In general terms, the German speaking metropolitan areas of Zurich, Basel, Berne and Lucerne are more on the left. Yet, the Lucerne area changed from a marked left position in 1979 and 1991 to a more right wing position in 1999.

How can we explain these disparities and in what way are they related to socio-structural variables? According to the results drawn from multi-level regression the most important factors that are linked to the economic left/right orientation of an urban commune in Switzerland are the proportion of foreign born people, and the proportion of retired persons. Communes with high proportions of foreign-born and retired people are more on the right. In 1979, however, these variables were only two among a variety of other characteristics that had affected economic left/right voting. Communes on the left had been characterised by more socio-economic hardship, larger proportions of residents under 18 years, single-family housing and higher population density and population size. Except of socio-economic hardship all these variables were of no importance in 1991. Instead the proportion of foreign-born people turned out to be the strongest predictor for economic left/right voting. In addition, communes at a large distance to the centre tended to be more on the right.

## Table 7 : Determinants of *economic left/right conflict* 1979-1999 (multilevel regression model)

| Parameter | Estimates | | |
|---|---|---|---|
| | **1979** | **1991** | **1999** |
| ***Fixed Effects*** | | | |
| Constant | -.152<br>(.051) | -.051<br>(.136) | .011<br>(.086) |
| **Commune-Level Variables** | | | |
| Foreign-born | .188**<br>(.067) | .445**<br>(.082) | .335**<br>(.082) |
| SES Hardship | -.420**<br>(.092) | -.287**<br>(.087) | -.216<br>(.125) |
| SES Generally | -.012<br>(.087) | .106<br>(.080) | .301**<br>(.096) |
| Manufacturing occupation | | -.088<br>(.064) | .152*<br>(.072) |
| Simpson index of economic diversity | | -.087<br>(.049) | .074<br>(.049) |
| Residents under 18 years | -.160**<br>(.062) | .029<br>(.054) | -.005<br>(.068) |
| Retirees | .255**<br>(.071) | .167*<br>(.068) | .196**<br>(.071) |
| Single-family housing | -.290**<br>(.065) | .044<br>(.063) | -.028<br>(.073) |
| Ln(Density) | -.255**<br>(.083) | -.088<br>(.067) | -.100<br>(.075) |
| Out-commuting | | -.036<br>(.044) | .052<br>(.051) |
| Distance to the centre | .036<br>(.048) | .150**<br>(.044) | -.024<br>(.050) |
| New housing | -.012<br>(.066) | .035<br>(.054) | .111<br>(.058) |
| Stability of residence | -.088<br>(.062) | -.013<br>(.053) | .075<br>(.055) |
| Ln(Population) | -.271**<br>(.078) | .101<br>(.073) | -.280**<br>(.080) |
| Population growth | | -.012<br>(.052) | -.021<br>(.055) |
| **Metropolitan Area-Level Variables** | | | |
| Metropolitan population | | | |
| French language region | -.152**<br>(.051) | .434**<br>(.145) | |
| Italian language region | +** | | |
| Fragmentation (Zeigler-Brunn) | | | |
| Concentration (Herfindahl) | | | |
| Segregation (dissimilarity index) | | | |
| Polarisation (Nathan-Adams index) | | | -.234**<br>(.085) |
| ***Variance Components*** | | | |
| Commune-Level | .774**<br>(.050) | .443**<br>(.029) | .615**<br>(.040) |
| Metropolitan Area-Level | .000<br>(.000) | .120<br>(.069) | .039<br>(.027) |
| -2 Log Likelihood | 1231.288 | 985.416 | 1125.551 |
| N | 477 | 477 | 474 |

Note: Table entries are standardised maximum likelihood (IGLS) estimates with estimated standard errors in parentheses.
*=p<.05, **=p<.01
As the number of level 2 units is very low (N=7) simultaneous estimation of the effects of metropolitan area-level variables failed. Therefore only models with one variable at the second level had been estimated. For each year the model with the most significant level 2 estimate is reported. Added are the direction and the level of significance of significant estimates from other single level 2 variable models.
Empty cells in upper part of the table indicate missing data whereas in the lower part it stands for non significant effects.

In 1999 the picture changed once again. The proportion of foreign-born still had been the strongest predictor for economic right voting. Yet, instead of socio-economic hardship, high socio-economic status had a significant effect. Accordingly the position of the median voter in high socio-economic status communes was more on the right. Finally large communes were again on the left.

Differences between metropolitan areas can be explained by the language regions in 1979 and 1991. Interestingly, French speaking metropolitan areas were on the left in 1979 and on the right in 1991. In 1999 the only significant metropolitan area-level variable was polarisation, as measured by the city-suburb disparity index proposed by Nathan and Adams (1976).

In sum the socio-structural predictors of the economic left/right disparities in Swiss metropolitan areas has changed from 1979 to 1999 whilst the most important changes occurred between 1979 and 1991 when the effects of globalisation started to alter Swiss politics (Kriesi et al. 2006, see above).

*b) socio-economic globalisation winners/loser*

Similar patterns of differentiation in metropolitan areas can be seen with respect to the socio-economic globalisation winners/loser conflict, though their occurrence generally differs from those related to the economic left/right conflict. More often we find either cases with no differences between types of urban commune types or where we have a complex pattern related to the socio-economic disparities in a given metropolitan area. Only in the Zurich area in 1979 and 1991 and in the Lausanne area in 1999 as well as in the Lugano area in 1979, one finds political polarisation between the central city and its suburbs.

Save the metropolitan area of Lugano, central cities and poor suburbs tend to support political programmes in favour of socio-economic globalisation losers whereas middle class suburbs, i.e. market regulation and protectionism, whereas affluent suburbs and low density suburbs people agree more on open market policies. Complex or polarised patterns of political differentiation mainly occur in the 1991 election in the German speaking metropolitan areas of Zurich, Basle, and Berne which is in stark contrast to the absence of political differences between commune types in these areas regarding the economic left/right conflict the same year (see above). Equally, with the exception of the Zurich and Geneva areas, there are no spatial disparities in Swiss metropolitan areas in 1999 with respect to the socio-economic globalisation conflict.

**Table 8 : Homogenous subsets of scores of *socio-economic globalisation winners/loser conflict* 1979-1999 (based on ANOVA)**

| MA | 1979 | | | 1991 | | | 1999 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Zurich** | | **X** | | | **X** | | **X** | **X** | | |
| Urban concentration | | x | | | x | | | | x | |
| Poor suburbs | x | | | x | | | | x | | |
| Middle class suburbs | x | | | x | | | x | x | | |
| Affluent suburbs | x | | | x | | | x | | | |
| Low density suburbs | x | | | x | | | | x | | |
| **Basle** | | **X** | | | | **X** | | | | **X** |
| Urban concentration | | | x | | x | | x | | | |
| Poor suburbs | | x | | x | x | | x | | | |
| Middle class suburbs | x | x | | | x | | x | | | |
| Affluent suburbs | x | | | x | x | | x | | | |
| Low density suburbs | x | | | x | | | x | | | |
| **Geneva** | | **X** | | **X** | | | **X** | | | |
| Urban concentration | | x | | | | x | | x | | |
| Poor suburbs | | x | | | x | | | x | | |
| Middle class suburbs | x | x | | | x | | x | | | |
| Affluent suburbs | x | x | | x | x | | x | | | |
| Low density suburbs | x | | | x | | | x | | | |
| **Berne** | **X** | | | | **X** | **X** | | **X** | **X** | |
| Urban concentration | x | | | | x | | x | | | |
| Poor suburbs | x | | | | x | | x | | | |
| Middle class suburbs | x | | | x | | | x | | | |
| Affluent suburbs | x | | | x | | | x | | | |
| Low density suburbs | x | | | x | | | x | | | |
| **Lausanne** | | **X** | | **X** | | | **X** | **X** | | |
| Urban concentration | | | x | | x | | | x | | |
| Poor suburbs | | x | | | x | | x | | | |
| Middle class suburbs | x | x | | x | x | | x | | | |
| Affluent suburbs | x | x | | x | | | x | | | |
| Low density suburbs | x | | | x | | | x | | | |
| **Lucerne** | | **X** | | | | **X** | | | **X** | **X** |
| Urban concentration | x | | | x | | | x | | | |
| Poor suburbs | x | | | x | | | x | | | |
| Middle class suburbs | x | | | x | | | x | | | |
| Affluent suburbs | x | | | x | | | x | | | |
| Low density suburbs | x | | | x | | | x | | | |
| **Lugano** | | **X** | | | **X** | **X** | | | | **X** |
| Urban concentration | x | | | x | | | x | | | |
| Poor suburbs | | x | | | x | | x | | | |
| Middle class suburbs | | x | | | x | | x | | | |
| Affluent suburbs | | x | | | x | | x | | | |
| Low density suburbs | | | | x | | | | | | |

Homogenous groups according to Scheffe's post hoc test; significance=0.05

Interestingly, while the disparities within metropolitan areas were on the decrease those between the urban regions increased. Based on the ANOVA post hoc procedure one can discern four homogenous groups in 1999 compared to two in 1979 and three in 1991. Moreover there is no clear relationship between the degree to which a metropolitan area is integrated in the world market and the position of its median voter on the socio-economic globalisation conflict scale. In 1999 voters in the metropolitan areas of Zurich with its international finance services tended to support open market policies whereas the Basle area

with its important pharmaceutical industry is definitely more in favour of regulated capitalism and protectionism.

**Table 9 : Determinants of *socio-economic globalisation winners/loser conflict* 1979-1999 (multilevel regression model)**

| Parameter | Estimates | | |
|---|---|---|---|
| | **1979** | **1991** | **1999** |
| ***Fixed Effects*** | | | |
| Constant | .014<br>(.072) | .047<br>(.156) | .025<br>(.143) |
| **Commune-Level Variables** | | | |
| Foreign-born | -.082<br>(.060) | -.519**<br>(.092) | -.425**<br>(.073) |
| SES Hardship | .231**<br>(.079) | .287**<br>(.098) | .318**<br>(.106) |
| SES Generally | -.043<br>(.070) | -.088<br>(.093) | -.261**<br>(.082) |
| Manufacturing occupation | | .190*<br>(.080) | -.052<br>(.065) |
| Simpson index of economic diversity | | .080<br>(.056) | -.050<br>(.041) |
| Residents under 18 years | -.023<br>(.059) | -.087<br>(.063) | .036<br>(.058) |
| Retirees | -.027<br>(.072) | -.208**<br>(.079) | -.157**<br>(.060) |
| Single-family housing | .199**<br>(.056) | -.110<br>(.070) | -.060<br>(.062) |
| Ln(Density) | .259**<br>(.070) | .082<br>(.075) | .104<br>(.063) |
| Out-commuting | | .051<br>(.051) | -.004<br>(.043) |
| Distance to the centre | .021<br>(.055) | -.245**<br>(.053) | -.175**<br>(.043) |
| New housing | .075<br>(.057) | -.055<br>(.060) | .060<br>(.049) |
| Stability of residence | -.054<br>(.049) | .073<br>(.062) | .046<br>(.048) |
| Ln(Population) | .168*<br>(.065) | .006<br>(.084) | .184**<br>(.070) |
| Population growth | | .061<br>(.055) | .045<br>(.048) |
| **Metropolitan Area-Level Variables** | | | |
| Metropolitan population | | | |
| French language region | | | |
| Italian language region | | | +* |
| Fragmentation (Zeigler-Brunn) | | | +* |
| Concentration (Herfindahl) | | | -* |
| Segregation (dissimilarity index) | | .339*<br>(.169) | .379**<br>(.138) |
| Polarisation (Nathan-Adams index) | -.142*<br>(.070) | | |
| ***Variance Components*** | | | |
| Commune-Level | .268**<br>(.023) | .447**<br>(.033) | .435**<br>(.028) |
| Metropolitan Area-Level | .021<br>(.015) | .156<br>(.089) | .131<br>(.075) |
| -2 Log Likelihood | 433.634 | 796.826 | 971.177 |
| N | 279 | 382 | 474 |

Note: Table entries are standardised maximum likelihood (IGLS) estimates with estimated standard errors in parentheses.
*=p<.05, **=p<.01
As the number of level 2 units is very low (N=7) simultaneous estimation of the effects of metropolitan area-level variables failed. Therefore only models with one variable at the second level had been estimated. For each year the model with the most significant level 2 estimate is reported. Added are the direction and the level of significance of significant estimates from other single level 2 variable models.
Empty cells in upper part of the table indicate missing data whereas in the lower part it stands for non significant effects.

Regarding results from multilevel regression, throughout the observed time period the median voters' position in communes with important socio-economic hardship is that of

supporting political programmes favouring socio-economic globalisation losers. In 1979 single-family housing, population density and population size also had a positive effect on the support of such policies. As with the economic left/right scale, the composition of the significant effects, however, changed between 1979 and 1991. From then on there is a highly significant outcome of the proportion of foreign-born people: voters in communes where this proportion had been high more often support free market policies and anti-protectionism. The same is true for communes with large proportions of retired people and communes far away from the centre. Furthermore it is noteworthy that manufacturing occupation had but a weak effect in 1991 on the median voters' position. At that time communes with high proportions of people working in manufacturing services were in favour of market regulation.

Political differences between metropolitan areas were mainly due to intra-metropolitan polarisation and segregation. The more a metropolitan area had been polarised the more it was in favour of free market policies in 1979. In 1991 and 1999 more segregated metropolitan areas displayed large support for market regulation. In 1999, institutional fragmentation and belonging to the Italian language region favoured market regulating political programmes, too, whereas institutional concentration led to support of free market policies.

*c) libertarian/authoritarian value cleavage*

Regarding the cultural conflict between libertarian and authoritarian values the median voter of central cities is generally more libertarian than median voters of other types of communes. This is especially true for the 1999 elections when in all metropolitan areas except of that of Lugano the central city's score on the conflict scale is significantly different from those of the other commune types. In the MAs of Basle, Berne Lausanne and Lucerne we find a polarised pattern with all suburban types tending towards more authoritarian values than the central city. The metropolitan areas of Zurich and Geneva, however, reveal a more complex picture. In the Zurich area authoritarian values find the most support in affluent and low density suburbs whereas poor and middle class suburbs and some low density suburbs are somewhat more in favour of libertarian values. In the Geneva area the poor suburbs are less authoritarian than the other suburbs but not as libertarian as the central city.

In 1991 such complex patterns of political disparities are even more frequent. Save the metropolitan area of Lucerne where there are no spatial differences between urban commune types one can discern at least two homogenous groups. In the Basle, Geneva, Berne and Lausanne areas these differences reproduce more or less the socio-economic discontinuities while the Zurich area is depicting a polarised pattern. In the Lugano area the only low density commune is closer to the libertarian pole than the other suburbs.

**Table 10 : Homogenous subsets of scores of *libertarian/authoritarian conflict* 1979-1999 (based on ANOVA)**

| MA | 1979 | | | | | 1991 | | | | | 1999 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Zurich** | **X** | **X** | | | | | | **X** | | | **X** | **X** | | | |
| Urban concentration | x | | | | | x | | | | | x | | | | |
| Poor suburbs | x | | | | | | x | | | | | x | | | |
| Middle class suburbs | x | x | | | | | x | | | | | x | | | |
| Affluent suburbs | | x | | | | | x | | | | | | x | | |
| Low density suburbs | x | | | | | | x | | | | | x | x | | |
| **Basle** | | **X** | **X** | | | | **X** | | | | | **X** | **X** | | |
| Urban concentration | x | | | | | x | | | | | x | | | | |
| Poor suburbs | | x | | | | x | x | | | | | x | | | |
| Middle class suburbs | | x | | | | x | | | | | | x | | | |
| Affluent suburbs | | x | | | | x | x | | | | | x | | | |
| Low density suburbs | | x | | | | | x | | | | | x | | | |
| **Geneva** | | | **X** | **X** | | | | **X** | | | | | | **X** | **X** |
| Urban concentration | x | | | | | x | | | | | x | | | | |
| Poor suburbs | x | | | | | | x | | | | | x | | | |
| Middle class suburbs | x | | | | | | x | | | | | | x | | |
| Affluent suburbs | x | | | | | | x | x | | | | | x | | |
| Low density suburbs | x | | | | | | | x | | | | | x | | |
| **Berne** | **X** | | | | | | | **X** | | | **X** | | | | |
| Urban concentration | x | | | | | x | | | | | x | | | | |
| Poor suburbs | x | | | | | x | | | | | | x | | | |
| Middle class suburbs | x | | | | | | x | | | | | x | | | |
| Affluent suburbs | x | | | | | | x | | | | | x | | | |
| Low density suburbs | x | | | | | | x | | | | | x | | | |
| **Lausanne** | | **X** | **X** | | | | | **X** | | | | | **X** | **X** | |
| Urban concentration | x | | | | | x | | | | | x | | | | |
| Poor suburbs | | x | | | | | x | | | | | x | | | |
| Middle class suburbs | | x | | | | | x | x | | | | x | | | |
| Affluent suburbs | | x | | | | | | x | | | | x | | | |
| Low density suburbs | | x | | | | | | x | | | | x | | | |
| **Lucerne** | | | | **X** | **X** | **X** | | | | | | | **X** | **X** | **X** |
| Urban concentration | x | | | | | x | | | | | x | | | | |
| Poor suburbs | x | | | | | x | | | | | | x | | | |
| Middle class suburbs | x | | | | | x | | | | | | x | | | |
| Affluent suburbs | x | | | | | x | | | | | | x | | | |
| Low density suburbs | x | | | | | x | | | | | | x | | | |
| **Lugano** | | | | | **X** | **X** | **X** | | | | | | | | **X** |
| Urban concentration | x | | | | | x | | | | | x | | | | |
| Poor suburbs | x | | | | | | x | | | | x | | | | |
| Middle class suburbs | x | | | | | | x | | | | x | | | | |
| Affluent suburbs | x | | | | | | x | | | | x | | | | |
| Low density suburbs | | | | | | x | | | | | | | | | |

Homogenous groups according to Scheffe's post hoc test; significance=0.05

Finally there are but rare cases of spatial differences of value orientation for the 1979 elections. These can be found in the Zurich, Basle and Lausanne areas. Whereas in the latter cases the libertarian central city is opposed to a homogenous group of more authoritarian suburbs, the Zurich area is characterised by a libertarian group consisting of the central city as well as poor, middle class and low density suburban communes on the one the one hand and an authoritarian group encompassing some middle class suburbs and the affluent communes on the other.

What strikes most are the important differences between the seven metropolitan areas under scrutiny. For the 1979 and 1999 elections no less than five groups resulted from the ANOVA post hoc test. Furthermore, the overall pattern of inter-metropolitan political differences is not consistent during the observed time period. In 1979 the Zurich area is the most libertarian one whilst the metropolitan areas of Lucerne and Lugano are among the most authoritarian ones. This picture is reversed in 1991.

As with the socio-economic conflicts the proportion of retired people is a stable predictor of the median voters' position on the libertarian/authoritarian conflict scale. The more retirees a commune comprises the more it tends to supporting authoritarian political programmes. In addition libertarian values find more electoral support in large communes.

Also as with the socio-economic conflicts discussed above the proportion of foreign-born people strongly affects value orientation in 1991 and 1999 in that support for authoritarian policies is higher in urban communes with important amounts of foreign-born people. In the same years new housing is positively related to authoritarian values, too. In 1979 and again in 1999 authoritarian voting is notable in high socio-economic status communes whereas in 1999 communes with high socio-economic hardship tend to vote in favour of libertarian parties. Authoritarian voting is also important in densely populated communes in 1979.

Interestingly, some variables have different effects on the vote depending on the year of the election. In 1979 support for libertarian policies had been high in communes distant from centre. In 1991 these communes displayed a more authoritarian political orientation. Only weakly correlated are the inconsistent effects of economic diversity in 1991 and 1999.

**Table 11 : Determinants of *libertarian/authoritarian conflict* 1979-1999 (multilevel regression model)**

| Parameter | Estimates | | |
|---|---|---|---|
| | **1979** | **1991** | **1999** |
| ***Fixed Effects*** | | | |
| Constant | -.001<br>(.182) | -.107<br>(.190) | -.011<br>(.126) |
| **Commune-Level Variables** | | | |
| Foreign-born | .028<br>(.079) | .389**<br>(.096) | .276**<br>(.076) |
| SES Hardship | -.071<br>(.097) | -.078<br>(.102) | -.320**<br>(.113) |
| SES Generally | .174*<br>(.088) | .160<br>(.097) | .215*<br>(.087) |
| Manufacturing occupation | | -.080<br>(.084) | .125<br>(.068) |
| Simpson index of economic diversity | | -.141*<br>(.059) | .092*<br>(.044) |
| Residents under 18 years | .122<br>(.075) | .042<br>(.065) | .050<br>(.061) |
| Retirees | .270**<br>(.093) | .168*<br>(.083) | .290**<br>(.064) |
| Single-family housing | .054<br>(.069) | .065<br>(.073) | -.106<br>(.065) |
| Ln(Density) | .212*<br>(.085) | -.035<br>(.078) | -.050<br>(.067) |
| Out-commuting | | -.096<br>(.053) | .086<br>(.046) |
| Distance to the centre | -.217**<br>(.070) | .251**<br>(.056) | .045<br>(.046) |
| New housing | -.013<br>(.071) | .147*<br>(.062) | .153**<br>(.052) |
| Stability of residence | -.022<br>(.060) | -.003<br>(.064) | .102*<br>(.050) |
| Ln(Population) | -.195*<br>(.083) | -.202*<br>(.088) | -.286**<br>(.073) |
| Population growth | | -.001<br>(.058) | -.090<br>(.050) |
| **Metropolitan Area-Level Variables** | | | |
| Metropolitan population | | | -.407**<br>(.145) |
| French language region | | | |
| Italian language region | | | |
| Fragmentation (Zeigler-Brunn) | | | |
| Concentration (Herfindahl) | -.357<br>(.186) | | |
| Segregation (dissimilarity index) | | -.421*<br>(.205) | |
| Polarisation (Nathan-Adams index) | | | |
| ***Variance Components*** | | | |
| Commune-Level | .395**<br>(.034) | .485**<br>(.035) | .492**<br>(.032) |
| Metropolitan Area-Level | .194<br>(.111) | .239<br>(.134) | .088<br>(.053) |
| -2 Log Likelihood | 552.719 | 829.695 | 1025.928 |
| N | 279 | 382 | 474 |

Note: Table entries are standardised maximum likelihood (IGLS) estimates with estimated standard errors in parentheses.
*=p<.05, **=p<.01
As the number of level 2 units is very low (N=7) simultaneous estimation of the effects of metropolitan area-level variables failed. Therefore only models with one variable at the second level had been estimated. For each year the model with the most significant level 2 estimate is reported. Added are the direction and the level of significance of significant estimates from other single level 2 variable models.
Empty cells in upper part of the table indicate missing data whereas in the lower part it stands for non significant effects.

As regards the 1979 election the large differences between metropolitan areas cannot be explained by any of the metropolitan area-level variables. In 1999 the differences are mainly due to the size of the metropolitan area: large metropolitan areas are more in favour of

libertarian political programmes than small ones. Finally, in 1991, the libertarian vote is comparably high in segregated metropolitan areas.

*d) cultural globalisation winners/losers*

There are in general few differences among urban commune types regarding the conflict between cultural globalisation winners and losers. For the 1979 elections we find no differences at all in the metropolitan areas of Geneva, Lausanne, and Lucerne. The Zurich, Basle, Berne, and Lugano areas display a polarised pattern with central cities strongly supporting parties that are in favour of cultural openness opposed to suburbs that are more in favour of traditional values and reluctant to multiculturalism.

For the 1991 elections the ANOVA pos hoc test reveals a complex pattern in the Zurich and the Basle metropolitan areas but no major differences in the other MAs. In the Zurich as well as in the Basle area the central city is still the commune with the largest support for cultural globalisation winner programmes whereas in poor suburbs, affluent suburbs and low density suburbs the vote is generally more in favour of those who defend the 'national way of life'.

In 1999 in all but the metropolitan areas of Lausanne and Lugano there are political variations between types of urban communes. In the metropolitan areas of Basle and Berne the central city turns out to be the place where citizens are more in favour of policies in accordance with multiculturalism and internationalism than in suburbia. In the Zurich, Geneva and Lucerne areas the picture goes, again, beyond that central city/suburb polarisation. In the metropolitan area of Zurich poor and low density communes are the least supportive of cultural globalisation winners' programmes. Such programmes, however, are more welcome in affluent and middle class as well as in some poor communes. Clearly against isolationism is the city of Zurich. In the metropolitan areas of Geneva and Lucerne the differences in value voting regarding globalisation arise between central cities, poor and middle class suburbs on the one hand and affluent as well as low density suburbs on the other. Yet again, the former are more in favour of international integration and more open to other cultures than the latter.

**Table 12 : Homogenous subsets of scores of *cultural globalisation winner/loser conflict* 1979-1999 (based on ANOVA)**

| MA | 1979 | | | 1991 | | | 1999 | | |
|---|---|---|---|---|---|---|---|---|---|
| **Zurich** | **X** | **X** | | | **X** | **X** | | **X** | |
| Urban concentration | x | | | x | | | x | | |
| Poor suburbs | | x | | | x | x | | x | x |
| Middle class suburbs | | x | | | x | | | x | |
| Affluent suburbs | | x | | | x | x | | x | |
| Low density suburbs | | x | | | | x | | | x |
| **Basle** | **X** | **X** | | **X** | **X** | | **X** | | |
| Urban concentration | x | | | x | | | x | | |
| Poor suburbs | | x | | | x | x | | x | |
| Middle class suburbs | | x | | | x | | | x | |
| Affluent suburbs | | x | | | x | x | | x | |
| Low density suburbs | | x | | | | x | | x | |
| **Geneva** | **X** | | | | | **X** | **X** | **X** | |
| Urban concentration | x | | | x | | | | x | |
| Poor suburbs | x | | | x | | | | x | |
| Middle class suburbs | x | | | x | | | | x | x |
| Affluent suburbs | x | | | x | | | | | x |
| Low density suburbs | x | | | x | | | | x | x |
| **Berne** | **X** | **X** | | | | | **X** | **X** | |
| Urban concentration | x | | | x | | | | x | |
| Poor suburbs | | x | | x | | | | | x |
| Middle class suburbs | | x | | x | | | | | x |
| Affluent suburbs | | x | | x | | | | | x |
| Low density suburbs | | x | | x | | | | | x |
| **Lausanne** | **X** | | | | **X** | **X** | | **X** | |
| Urban concentration | x | | | x | | | | x | |
| Poor suburbs | x | | | x | | | | x | |
| Middle class suburbs | x | | | x | | | | x | |
| Affluent suburbs | x | | | x | | | | x | |
| Low density suburbs | x | | | | x | | | x | |
| **Lucerne** | | | **X** | **X** | | | | **X** | |
| Urban concentration | x | | | x | | | | x | |
| Poor suburbs | x | | | x | | | | x | x |
| Middle class suburbs | x | | | x | | | | x | x |
| Affluent suburbs | x | | | x | | | | x | |
| Low density suburbs | x | | | x | | | | | x |
| **Lugano** | | **X** | | **X** | **X** | | | **X** | |
| Urban concentration | x | | | | x | | | x | |
| Poor suburbs | | x | | | x | | | x | |
| Middle class suburbs | | x | | | x | | | x | |
| Affluent suburbs | | x | | | x | | | x | |
| Low density suburbs | | | | x | | | | | |

Homogenous groups according to Scheffe's post hoc test; significance=0.05

From 1979 to 1999 the political differences between the metropolitan areas have decreased which contrasts with the important inter-metropolitan disparities as regards the libertarian/authoritarian value conflict. In addition the relative positions of the metropolitan areas were changing during that time. For instance, the Lucerne area was the most in favour of cultural globalisation winner programmes compared to the other metropolitan areas. In 1991 and 1999 the support for such programmes was the least in that place. Note that the differences among metropolitan areas in Switzerland were most important in 1991.

**Table 13 : Determinants of *cultural globalisation winner/loser conflict* 1979-1999 (multilevel regression model)**

| Parameter | Estimates | | |
|---|---|---|---|
| | **1979** | **1991** | **1999** |
| ***Fixed Effects*** | | | |
| Constant | .097<br>(.134) | -.058<br>(.178) | .015<br>(.077) |
| **Commune-Level Variables** | | | |
| Foreign-born | -.162<br>(.092) | .315**<br>(.109) | .283**<br>(.080) |
| SES Hardship | .064<br>(.117) | .145<br>(.115) | -.115<br>(.125) |
| SES Generally | .240*<br>(.105) | .168<br>(.110) | -.306**<br>(.095) |
| Manufacturing occupation | | -.037<br>(.094) | .017<br>(.070) |
| Simpson index of economic diversity | | -.222**<br>(.067) | -.045<br>(.049) |
| Residents under 18 years | .180*<br>(.088) | .128<br>(.074) | .100<br>(.066) |
| Retirees | -.134<br>(.110) | .131<br>(.094) | .075<br>(.070) |
| Single-family housing | -.053<br>(.083) | .078<br>(.082) | .049<br>(.071) |
| Ln(Density) | -.030<br>(.103) | -.086<br>(.089) | -.148*<br>(.074) |
| Out-commuting | | -.052<br>(.060) | -.010<br>(.050) |
| Distance to the centre | -.055<br>(.083) | .122<br>(.063) | -.018<br>(.050) |
| New housing | -.207*<br>(.085) | .122<br>(.070) | .110<br>(.057) |
| Stability of residence | .190*<br>(.072) | .053<br>(.073) | -.035<br>(.055) |
| Ln(Population) | -.167<br>(.099) | -.218*<br>(.099) | -.104<br>(.080) |
| Population growth | | .025<br>(.065) | -.029<br>(.055) |
| **Metropolitan Area-Level Variables** | | | |
| Metropolitan population | | | .578**<br>(.094) |
| French language region | | | |
| Italian language region | | | |
| Fragmentation (Zeigler-Brunn) | | | |
| Concentration (Herfindahl) | -.301*<br>(.138) | | |
| Segregation (dissimilarity index) | | -.367<br>(.194) | |
| Polarisation (Nathan-Adams index) | | | |
| ***Variance Components*** | | | |
| Commune-Level | .584**<br>(.050) | .623**<br>(.046) | .607**<br>(.040) |
| Metropolitan Area-Level | .084<br>(.055) | .204<br>(.117) | .027<br>(.020) |
| -2 Log Likelihood | 654.194 | 923.060 | 1117.841 |
| N | 279 | 382 | 482 |

Note: Table entries are standardised maximum likelihood (IGLS) estimates with estimated standard errors in parentheses.
*=p<.05, **=p<.01
As the number of level 2 units is very low (N=7) simultaneous estimation of the effects of metropolitan area-level variables failed. Therefore only models with one variable at the second level had been estimated. For each year the model with the most significant level 2 estimate is reported. Added are the direction and the level of significance of significant estimates from other single level 2 variable models.
Empty cells in upper part of the table indicate missing data whereas in the lower part it stands for non significant effects.

Multilevel regression reveals no stable relations between the position of a communes' median voter on the cultural globalisation winner/loser scale and indicators of socio-structural composition. In 1979 people in communes with high socio-economic status, high proportions of residents under 18 years and a high stability of residence were more in favour of policies that value national way of life, traditional morality, and which is critical vis-à-vis international

integration. Equally, new housing has a weak negative effect on the support of such programmes. However, the level of significance of these correlations is very low.

In the 1991 elections, the proportion of foreign-born people becomes an important predictor for the dependent variable. Where there are high proportions of foreign-born people the median voter is closer to parties with cultural globalisation loser programmes. Economic diversity and population size show effects in the reverse direction in 1991. Accordingly, large and economically diverse communes are more with parties adopting cultural globalisation winner programmes. In 1999 high socio-economic status has again a significant effect but this time in the other direction: communes with high socio-economic status tend to supporting multiculturalism and internationalism. The same counts for population density.

Variances between metropolitan areas can be explained by concentration in 1979 and by metropolitan population size in 1999. Concentrated metropolitan areas are more with cultural globalisation winner programmes at the end of the 1970s. At the end of the 1990s isolationism and defence of traditional and national values find support in large metropolitan areas. Finally, no metropolitan level-area variable displays significant effects regarding the 1991 elections.

## *5. Conclusion: the emerging urban-suburban divide*

The analyses presented in this paper suggest two main conclusions.

On the one hand, the results suggest the existence of politically relevant territorial cleavages within the metropolitan areas under scrutiny. Indeed, the presence of two definitional elements of such cleavages could be shown, namely a) a territorial differentiation of the socio-structural basis and b) the organisation of these cleavages by political parties, in terms of a differentiation of political positions for which socio-structural characteristics at the communal level are significant predictors. The spatial pattern of this cleavage is mainly one that differentiates central cities from the surrounding suburbs. Compared to their counterparts in the suburbs, voters in core cities are oriented more to the left, have affinities with policies directed at globalisation losers, are more libertarian and denote a higher cultural openness to the world. An additional, threefold, cleavage could be found in the larger metropolitan areas, denoting differences between core cities, middle-class and poor communes, as well as affluent and low density commune. More precisely, these three types of communes can be situated at three different points in the two-dimensional political space identified by Kriesi et al. (2005: 5, see above). Whereas the core cities tend towards a position characterised by left vote and cultural openness, affinities of poor and middle class

communes tend to be with the political right and cultural demarcation (i.e. nationalism), whereas affluent and low density communes tend to combine right vote with cultural openness.

On the other hand, the results also suggest that the cleavages within metropolitan areas have transformed over the last 30 years. Whereas the socio-economic status continues to be a significant predictor throughout, the presence of immigrants has become a significant predictor towards the end of the 1990s. This echoes findings by other authors who have argued that a cultural dimension between openness and demarcation has been added to the socio-economic dimension of political cleavages in Switzerland. Our analysis shows that this new cleavage dimension also finds a differential territorial expression in metropolitan areas.

## *6. References*

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## *Methodological appendix*

### 1. Communal Typology

The following procedure has been adopted:

1. Separate out the **central city** in each metropolitan area.

2. Use a factor based on *density*, *new housing*, and *distance to the centre* to separate out **low density suburbs**. Use the third (1990 and 2000) or the first (1980) 25$^{th}$ percentile as separator.

3. Use a factor based on *low education*, *retirees*, *unemployment*, *foreigners*, *low socio-economic status*, *non-western European languages*, *university education*, *highest status occupational group*, and *homeownership* to separate out **poor suburbs**, **middle class suburbs**, and **affluent suburbs**. Use the 33$^{rd}$ percentiles as separators.

### 2. Cleavage scales

The scores of the cleavage scales have been calculated using the Manifesto Research Group data by subtracting the sum of appropriate emphases to designate the positive pole of the scale from the sum of appropriate emphases indicating the negative pole. The procedure corresponds to that adopted by the Manifesto Research Group to construct their left/right scale (see Budge and Klingemann 2001: 21f., for a detailed description of the data see Appendix III in Budge et al. (eds) 2001). The scores had been obtained as follows:

a) Economic left/right scale

| | | |
|---|---|---|
| per401 Free enterprise<br>per402 Economic incentives<br>per414 Economic orthodoxy<br>per505 Social services: limitation | minus | per403 Regulate capitalism<br>per406 Protectionism: positive<br>per412 Controlled economy<br>per504 Social services: expansion<br>per506 Education: expansion |

d) cultural globalisation winner loser scale

| | | |
|---|---|---|
| per109 Internationalism: negative<br>per110 European Community: negative<br>per601 National way of life: positive<br>per603 Traditional morality: positive<br>per608 Multiculturalism: negative | minus | per107 Internationalism: positive<br>per108 European Community: positive<br>per604 Traditional Morality: negative<br>per607 Multiculturalism: positive |

b) libertarian/authoritarian scale

| | | |
|---|---|---|
| per104 Military: positive<br>per109 Internationalism: negative<br>per110 European Community: negative<br>per303 Governmental and administrative efficiency<br>per305 political authority<br>per601 National way of life: positive<br>per603 Traditional morality: positive<br>per605 Law and order<br>per606 Social harmony<br>per608 Multiculturalism: negative | minus | per105 Military: negative<br>per106 Peace<br>per107 Internationalism: positive<br>per201 Freedom and human rights<br>per202 Democracy<br>per301 Decentralisation<br>per411 Technology and infrastructure<br>per501 Environmental protection<br>per502 Culture<br>per503 Social Justice<br>per506 Education: expansion<br>per604 Traditional Morality: negative<br>per607 Multiculturalism: positive<br>per705 Underprivileged minority groups<br>per706 Non-economic demographic groups |

c) socio-economic globalisation winner/loser scale

| | | |
|---|---|---|
| per403 Regulate capitalism<br>per406 Protectionism: positive<br>per504 Social services: expansion | minus | per401 Free enterprise<br>per407 Protectionism: negative<br>per414 Economic orthodoxy |

**3. Median voter**

For each commune the position of the median voter on the cleavage scale had been calculated using the formula (see Kim and Fording 2001:163):

$$M = L + ((50-C)/F) \times W$$

Where:

M: median voter position (cleavage scale)

L: the lower end (cleavage scale) of the interval containing the median

C: the cumulative frequency (vote share) up to but not including the interval containing the median

F: the frequency (vote share) in the interval containing the median

W: the width of the interval containing the median

## 4. Description of variables

| Variable name | definition | missing values |
|---|---|---|
| ***dependent variables*** | | |
| National election turnout | - | 1979: 5/482<br>1991: 2/482<br>1999: 0/482 |
| Position of the median voter on the economic left/right conflict scale | (see above) | 1979: 5/482<br>1991: 2/482<br>1999: 0/482 |
| Position of the median voter on the socio-economic globalisation conflict scale | (see above) | 1979: 5/482<br>1991: 2/482<br>1999: 0/482 |
| Position of the median voter on the libertarian/ authoritarian conflict scale | (see above) | 1979: 5/482<br>1991: 2/482<br>1999: 0/482 |
| Position of the median voter on the cultural globalisation conflict scale | (see above) | 1979: 5/482<br>1991: 2/482<br>1999: 0/482 |
| ***independent variables commune-level*** | | |
| Foreign born | proportion of foreign born people when place of birth is known | 1980: 0/482<br>1990: 0/482<br>2000: 0/482 |
| SES Hardship | summary index: $(100*(x_i-x_{min})/(x_{max}-x_{min}))/5$<br>where:<br>$x_1$: proportion of people with low socio-economic status<br>$x_2$: proportion of unemployed people<br>$x_3$: proportion of people with low education profile<br>$x_4$ proportion of people in residences where number of rooms is smaller than number of occupants<br>$x_5$: proportion of retired people | 1980: 2/482<br>1990: 2/482<br>2000: 0/482 |
| SES Generally | summary index: $(100*(x_i-x_{min})/(x_{max}-x_{min}))/3$<br>where:<br>$x_1$: proportion of people with university degree<br>$x_2$: median income<br>$x_3$: proportion of heads of household with higher education (higher professional education, applied sciences university, university) | 1980: 2/482<br>1990: 2/482<br>2000: 0/482 |
| Manufacturing occupation | proportion of occupied people working in the 2nd sector | 1980: 482/482<br>1990: 0/482<br>2000: 0/482 |
| Simpson index of economic diversity | percentage of maximum value of the Simpson index (Simpson index=$1-\Sigma p_i^2$, where p stands for the proportion of occupied people in three socio-professional categories; maximum value:<br>Simpson index when all p= 1/number of categories) | 1980: 482/482<br>1990: 0/482<br>2000: 0/482 |
| Residents under 18 years | proportion of people under 18 years of age | 1980: 0/482<br>1990: 0/482<br>2000: 0/482 |
| Retirees | proportion of retired people | 1980: 2/482<br>1990: 2/482<br>2000: 0/482 |
| Single-family housing | proportion of residences that are single-family houses | 1980: 0/482<br>1990: 0/482<br>2000: 0/482 |
| Ln(Density) | natural logarithm of population/commune's surface | 1980: 2/482<br>1990: 2/482<br>2000: 0/482 |
| Out-commuting | proportion of occupied people working in another commune than commune of residence | 1980: 482/482<br>1990: 0/482<br>2000: 0/482 |
| Distance to the centre | geographic distance from a commune's centre to the centre of metropolitan area's core city in metres: $sqrt(x_1-x_2)^2*(y_1-y_2)^2)$,<br>where x and y indicate coordinates of geographic centres | 5/482 |
| New housing | proportion of dwelling houses built during the last 20 years (without renovations) | 1980: 0/482<br>1990: 0/482<br>2000: 0/482 |
| Stability of residence | proportion of population living in the same commune during the last five years | 1980: 0/482<br>1990: 0/482<br>2000: 0/482 |
| Ln(Population) | natural logarithm of population size | 1980: 2/482<br>1990: 2/482<br>2000: 0/482 |
| Population growth | population growth rate: $(x_{10}-x_0)/x_0$,<br>where:<br>x0: population size in year 0<br>x10: population in year 0+10 | 1980:482/482<br>1990: 0/482<br>2000: 0/482 |

| Variable name | definition | missing values |
|---|---|---|
| ***independent variables MA-level*** | | |
| Metropolitan population | population size of metropolitan area | 1980: 0/7<br>1990: 0/7<br>2000: 0/7 |
| French language region | dummy variable:<br>0: German and Italian speaking region<br>1: French speaking region | 1980: 0/7<br>1990: 0/7<br>2000: 0/7 |
| Italian Language region | dummy variable:<br>0: German and French speaking region<br>1: Italian speaking region | 1980: 0/7<br>1990: 0/7<br>2000: 0/7 |
| Fragmentation (Zeigler-Brunn) | number of communes per 10,000 inhabitants divided by the central city's share of the overall metropolitan population in percent | 1980: 0/7<br>1990: 0/7<br>2000: 0/7 |
| Concentration (Herfindahl) | index = $\Sigma p_i^2$,<br>where:<br>p: metropolitan commune's population share | 1980: 0/7<br>1990: 0/7<br>2000: 0/7 |
| Segregation (dissimilarity index) | $D = \sum_{i=1}^{n} \left[ t_i \lvert p_i - P \rvert / 2TP(1-P) \right]$<br>where:<br>$t_i$: total population of areal unit i of n communes<br>$p_i$: minority proportion of areal unit i of n communes<br>T: population size of the whole metropolitan area<br>P: minority proportion of the whole metropolitan area | 1980: 0/7<br>1990: 0/7<br>2000: 0/7 |
| Polarisation (Nathan-Adams index | Composite city-suburb hardship disparity index according to Nathan and Adams (1976, 1989), based on the following indicators:<br>a) Low educational profile: proportion of residents aged above 14 with no or only compulsory schooling<br>b) University degrees: proportion of residents holding an academic degree<br>c) Dependents: proportion of population younger than 18 or older than 65 years<br>d) Unemployment: proportion of population without a job and receiving a pension<br>e) Cultural heterogeneity: proportion of school classes with more than 30% non-native speakers | 1980: 0/7<br>1990: 0/7<br>2000: 0/7 |

Sources:
- coordinates of the communes' geographical centres: Institute for Transport Planning and Systems (ETH Zurich)
- median income: Federal Tax Administration
- all other data: Swiss Federal Statistical Office:

## *Appendix to 4.1 National electoral turnout*

### Table 14 : National electoral turnout : homogenous subsets of communes (based on ANOVA)

| MA | 1980 | | | | 1990 | | | | 2000 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Zurich** | | **X** | **X** | | | **X** | **X** | | | **X** | | |
| Urban concentration | x | | | | | x | | | | x | | |
| Poor suburbs | x | | | | x | | | | x | | | |
| Middle class suburbs | x | | | | | | x | | | x | | |
| Affluent suburbs | | x | | | | | | x | | | x | |
| Low density suburbs | | x | | | | | x | | | x | | |
| **Basle** | | **X** | | | **X** | **X** | **X** | | | **X** | | |
| Urban concentration | x | | | | x | | | | | x | | |
| Poor suburbs | | x | | | x | | | | x | | | |
| Middle class suburbs | | x | | | x | | | | x | x | | |
| Affluent suburbs | | x | | | | x | | | | x | | |
| Low density suburbs | | x | | | x | | | | x | | | |
| **Geneva** | **X** | **X** | | | **X** | **X** | | | **X** | | | |
| Urban concentration | x | | | | x | | | | x | | | |
| Poor suburbs | x | | | | x | x | | | x | x | | |
| Middle class suburbs | x | | | | | x | x | | | x | x | |
| Affluent suburbs | x | | | | | | x | | | | x | |
| Low density suburbs | x | | | | x | | | | x | | | |
| **Berne** | | | **X** | **X** | | | **X** | | | **X** | | |
| Urban concentration | x | | | | x | | | | x | | | |
| Poor suburbs | | x | | | x | | | | x | | | |
| Middle class suburbs | | x | | | x | | | | x | x | | |
| Affluent suburbs | | x | | | | x | | | | x | | |
| Low density suburbs | | x | | | x | | | | x | | | |
| **Lausanne** | **X** | | | | **X** | | | | **X** | | | |
| Urban concentration | x | | | | x | | | | x | | | |
| Poor suburbs | x | | | | x | | | | x | | | |
| Middle class suburbs | x | | | | x | | | | x | | | |
| Affluent suburbs | x | x | | | x | | | | x | | | |
| Low density suburbs | | x | | | x | | | | x | | | |
| **Lucerne** | | | | **X** | **X** | **X** | | | | **X** | **X** | |
| Urban concentration | x | | | | x | | | | x | | | |
| Poor suburbs | | x | | | x | | | | x | | | |
| Middle class suburbs | | | x | | x | | | | x | | | |
| Affluent suburbs | | x | x | | x | | | | x | | | |
| Low density suburbs | | | x | | x | | | | x | | | |
| **Lugano** | | | | **X** | | | | **X** | | | | **X** |
| Urban concentration | x | | | | x | | | | x | | | |
| Poor suburbs | x | | | | x | | | | | x | | |
| Middle class suburbs | x | | | | x | | | | | x | | |
| Affluent suburbs | x | | | | x | | | | | x | | |
| Low density suburbs | | | | | x | | | | | | | |

Homogenous groups according to Scheffe's post hoc test; significance=0.05